

Fujitsu LifeBook

S Series

BIOS Guide

LifeBook S Series Model:
S2210 - Vista

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FUJITSU COMPUTER SYSTEMS CORPORATION

S Series BIOS

BIOS SETUP UTILITY

The BIOS Setup Utility is a program that sets up the operating environment for your notebook. Your BIOS is set at the factory for normal operating conditions, therefore there should be no need to set or change the BIOS environment to operate your notebook.

The BIOS Setup Utility configures:

- Device control feature parameters, such as changing I/O addresses and boot devices.
- System Data Security feature parameters, such as passwords.

Entering the BIOS Setup Utility

To enter the BIOS Setup Utility, do the following (or use the TrustedCore Menu, as detailed in the next section):

1. Turn on or restart your notebook.
2. Press [F2] once the Fujitsu logo appears on the screen. This will open the main menu of the BIOS Setup Utility with the current settings displayed.
3. Press the [RIGHT ARROW] or [LEFT ARROW] key to scroll through the other setup menus to review or alter the current settings.

Using the TrustedCore Menu

When the Fujitsu logo appears on the screen, press the [Enter] key or click on the left mouse or touchpad button; the TrustedCore Menu will appear.

The TrustedCore Menu provides shortcuts to the following menus and information screens:

- BIOS Setup
- Diagnostic Screen
- Boot Menu
- Patent Information
- System Information
- Continue Booting

Clicking on any of the fields will invoke the screen, information, or action described.

The Boot Menu can also be invoked by pressing the [F12] key when the Fujitsu logo appears on the screen.

Navigating through the Setup Utility

The BIOS setup utility consists of six menus: Main, Advanced, Security, Boot, Info and Exit. This document explains each menu in turn including all submenus and setup items.

The following procedures allow you to navigate the setup utility menus:

1. To select a menu, use the cursor keys: [←], [→].
2. To select a field within a menu or a submenu, use the cursor keys: [↑], [↓].
3. To select the different values for each field, press the [Spacebar] to change to the next higher selection and [F5] or [-] to go to the next lower selection.
4. To activate a submenu press the [Enter] key.
5. To return to a menu from a submenu, press the [Esc] key.
6. To go to the Exit menu from any other menu, press the [Esc] key.

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- Selecting a field causes a help message about that field to be displayed on the right-hand side of the screen.



- Pressing the Enter key with the highlight on a selection that is not a submenu or auto selection will cause a list of all options for that item to be displayed. Pressing the Enter key again will select the highlighted choice.
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7. Pressing the [F9] key resets all items in the BIOS to the default values.
8. Pressing the [F10] key saves the current configuration and exits the BIOS Setup Utility. You will be asked to verify this selection before it is executed.
9. Pressing the [F1] key gives you a general help screen.

Entering the Setup Utility After a Configuration Change or System Failure

If there has been a change in the system configuration that does not agree with the parameter settings stored in your BIOS memory, or there is a failure in the system, the system beeps and/or displays an error message after the Power On Self Test (POST). If the failure is not too

severe, it will give you the opportunity to modify the settings of the setup utility, as described in the following steps:

1. When you turn on or restart the computer there is a beep and/or the following message appears on the screen:
Error message - please run SETUP program Press <F1> key to continue, <F2> to run SETUP
2. If an error message is displayed on the screen, and you want to continue with the boot process and start the operating system anyway, press the [F1] key.



- If your notebook emits a series of beeps that sounds like a code and the display is blank, please refer to the Troubleshooting section of your system Use's Guide. The Troubleshooting Section includes a list of error messages and their meanings.
- If your data security settings require it, you may be asked for a password before the operating system will be opened.

3. If an error message is displayed on the screen, and you want to enter the setup utility, press the [F2] key.
4. When the setup utility starts with a fault present, the system displays the following message:
Warning!
Error message
[Continue]
5. Press any key to enter the setup utility. The system will then display the Main Menu with current parameters values.

MAIN MENU – SETTING STANDARD SYSTEM PARAMETERS

The Main Menu allows you to set or view the current system parameters. (See *Navigating through the Setup Utility on page 2 for more information*)

The following tables show the names of the menu fields for the Main menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use. Note that the actual drive labels shown may vary.



System Time and System Date can also be set from your operating system without using the setup utility. Use the Date and Time icon on your Windows Control panel or type time or date from the MS-DOS prompt.

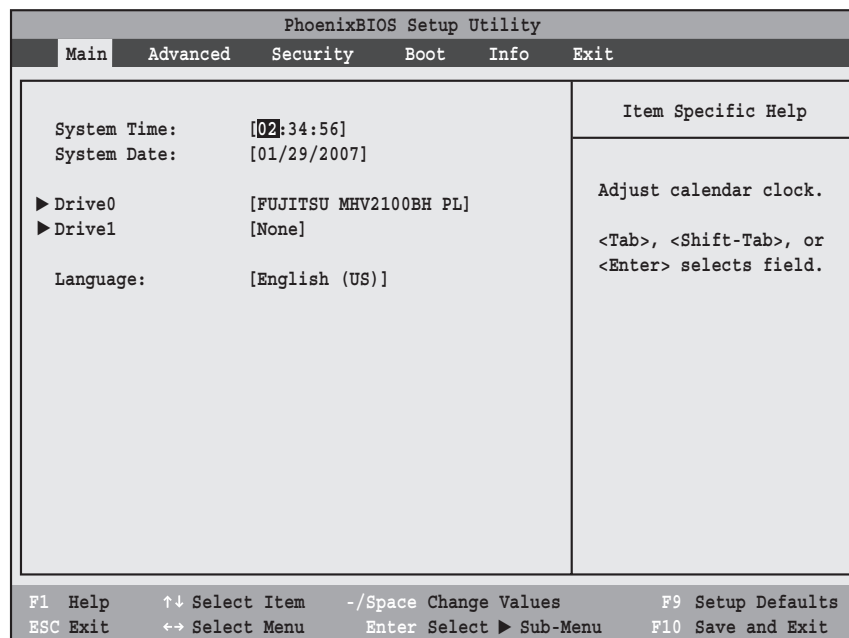


Figure 1. Main Menu

Table 1: Fields, Options and Defaults for the Main Menu

Menu Field	Options	Default	Description
System Time:	—	—	Sets and displays the current time. Time is in a 24 hour format of hours:minutes:seconds with 2 digits for each. (HH:MM:SS). Example: 16:45:57. You may change each segment of the time separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.

Table 1: Fields, Options and Defaults for the Main Menu

Menu Field	Options	Default	Description
System Date:	—	—	Sets and displays the current date. Date is in a month/day/year numeric format with 2 digits each for month and day and 4 digits for year. (MM/DD/YYYY) for example: 03/20/2006. You may change each segment of the date separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.
Drive0	Selects the Drive0 Serial ATA drive submenu	The product number of the hard drive.	Display the type of device on this ATA/IDE interface. Pressing the Enter key selects the Drive0 submenu allowing additional device configuration options for this interface.
Drive1:	Selects the Drive1 Serial ATA drive submenu	The product number of the CD-ROM drive.	Display the type of device on this ATA/IDE interface, if there is one. Pressing the Enter key selects the Drive1 submenu allowing additional device configuration options for this interface.
Language:	<ul style="list-style-type: none"> • English (US) • Japanese (JP) 	[English (US)]	The default setting differs between the US/European and the Japanese model. Selects the display language for the BIOS.

Drive0 Submenu of the Main Menu

The Drive0 submenu identifies what ATA devices are installed.

Note that actual hard drive label shown may vary. Depending on the drive type, information such as cylinders, heads and sectors may also be displayed.

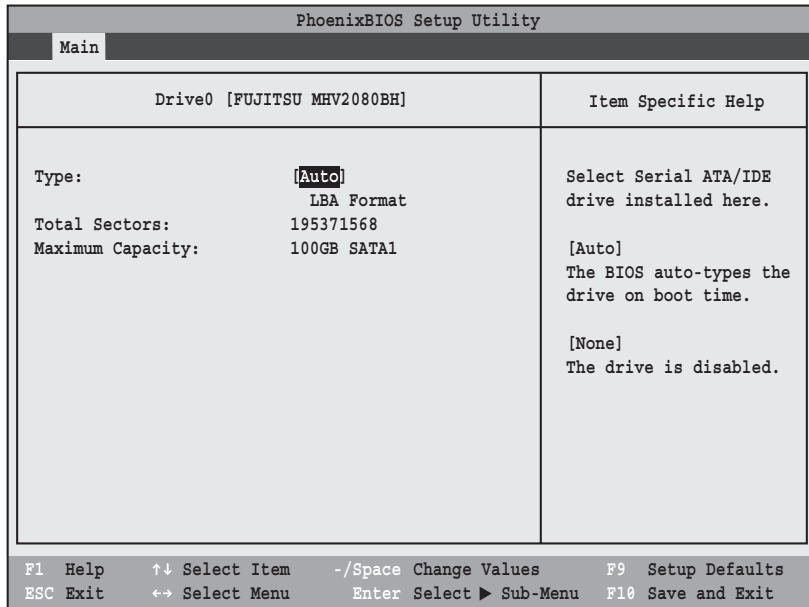


Figure 2. Drive0 Submenu

Table 2: Fields, Options and Defaults for the Drive0 Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	<ul style="list-style-type: none"> • Auto • None 	[Auto]	Selects the hard drive device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following Setup items do not appear.
LBA Format			Logical Block Addressing (LBA)
Total Sectors:	---	---	The total number of sectors on your hard disk
Maximum Capacity:	---	---	The maximum capacity of your hard disk



- A bootable CD-ROM or DVD-ROM may have a floppy disk or hard drive format. When a bootable CD-ROM or DVD-ROM is used, drive allocations change automatically without changing the BIOS setup. If a floppy disk format CD-ROM or DVD-ROM is used, the disc becomes Drive A. The CD-ROM or DVD-ROM will only take drive C: (hard drive format) if the internal hard drive is not present or is disabled. The bootable CD-ROM or DVD-ROM can never use a C: designation if a formatted internal hard drive is present since the C: designator is always reserved for the internal hard drive. The boot sequence ignores the new drive designations, however, your application software will use the new designations.
- Be aware of the operating environment when booting from CD-ROM/DVD-ROM or you may mistakenly overwrite files.

Drive1 Submenu of the Main Menu

The Drive1 submenu allows you to configure secondary ATA devices.

Note that actual hard drive label shown may vary. Depending on the drive type, information such as cylinders, heads and sectors may also be displayed.

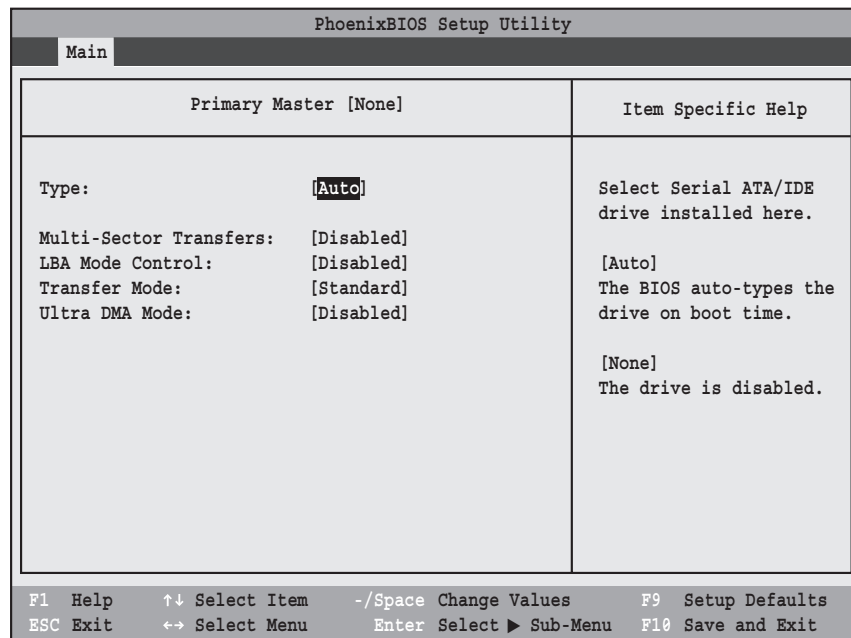


Figure 3. Drive1 Submenu

Table 3: Fields, Options and Defaults for the Drive1 Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	<ul style="list-style-type: none"> • Auto • None 	[Auto]	<p>NOTE: The Type field does not appear as a drop-down menu. Tap the spacebar to toggle the selections.</p> <p>Selects the ATA/ATAPI device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following setup items do not appear.</p>
Multi-Sector Transfers:	<ul style="list-style-type: none"> • Disabled • 2 Sectors • 4 Sectors • 8 Sectors • 16 Sectors 	[Disabled]	The best option is selected by the BIOS automatically when Auto is selected and cannot be selected by the user. Specifies the number of sectors per block for multiple sector transfer.
LBA Mode Control:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Disabled]	The best option is selected by the BIOS automatically when Auto is selected and cannot be selected by the user. Enables or disables Logical Block Addressing in place of Cylinder, Head, Sector addressing.

Table 3: Fields, Options and Defaults for the Drive1 Submenu of the Main Menu

Menu Field	Options	Default	Description
Transfer Mode:	<ul style="list-style-type: none"> • Standard • Fast PIO 1 • Fast PIO 2 • Fast PIO 3 • Fast PIO 4 • Multiword DMA 1 • Multiword DMA 2 	[Standard]	The best option is selected by the BIOS automatically when Auto is selected and cannot be selected by the user. Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode.
Ultra DMA Mode:	<ul style="list-style-type: none"> • Disabled • Mode 0 • Mode 1 • Mode 2 • Mode 3 • Mode 4 • Mode 5 	[Disabled]	The best option is selected by the BIOS automatically when Auto is selected and cannot be selected by the user. Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode.

Exiting from Main Menu

When you have finished setting the parameters on this menu, you can either exit from the setup utility, or move to another menu. If you wish to exit from the setup utility, press the [Esc] key or use the cursor keys to go to the Exit menu or to move to another menu.

ADVANCED MENU – SETTING DEVICE FEATURE CONTROLS

The Advanced Menu allows you to:

- Set the I/O addresses for the infrared ports.
- Set the features of the keyboard/mouse.
- Select between the display panel and/or an external display or video projector.
- Set internal device configurations
- Configure USB features.
- Configure miscellaneous features such as Wake Up On LAN.
- Configure DMI Event Logging.

Follow the instructions for Navigating Through the Setup Utility to make any changes.

(See Navigating through the Setup Utility on page 2 for more information)

The following tables show the names of the menu fields for the Advanced Menu and its submenus, all of the options for each field, the default settings and a description of the field's function, and any special information needed to help understand the field's use.

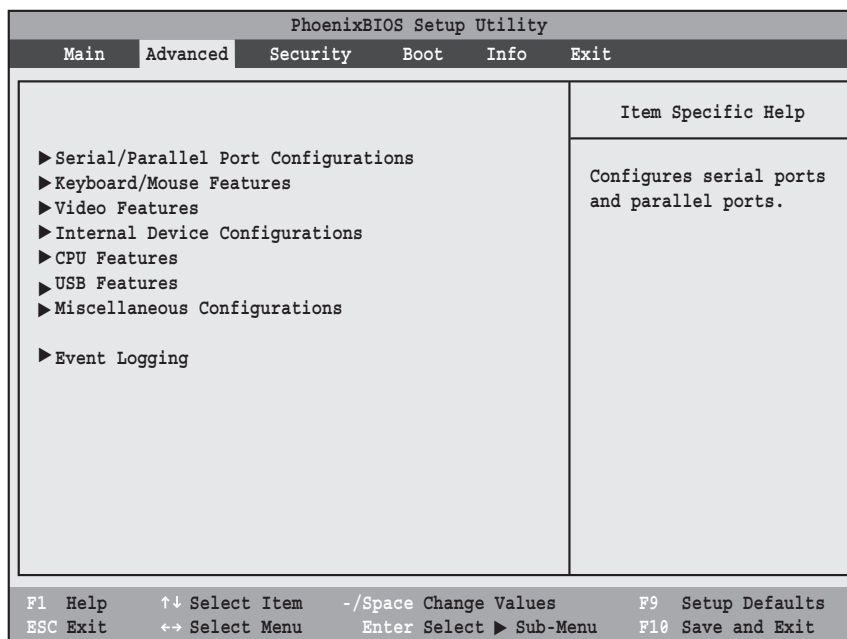


Figure 4. Advanced Menu

Table 4: Fields, Options and Defaults for the Advanced Menu

Menu Field	Description
Serial/Parallel Port Configurations	When selected, opens the Serial/Parallel Port Configurations submenu which allows the user to modify settings for serial, infrared, and parallel ports.
Keyboard/Mouse Features	When selected, opens the Keyboard/Mouse Features submenu, which allows setting external and internal keyboard and mouse parameters.
Video Features	When selected, opens the Video Features submenu, which allows setting of the display parameters, including routing of video signals to different displays or video projectors.

Table 4: Fields, Options and Defaults for the Advanced Menu

Menu Field	Description
Internal Device Configurations	When selected, opens the Internal Device Configuration submenu, which allows enabling or disabling the IDE LAN, and modem controllers.
CPU Features	When selected, opens the CPU Features submenu, which allows the user to enable or disable the AMD Virtualization(TM) features.
USB Features	Configures USB features.
Miscellaneous Configurations	Configures miscellaneous features, such as Wake Up On LAN and Power Button.
Event Logging	When selected, opens the event logging submenu.

Serial/Parallel Port Configuration Submenu of the Advanced Menu

The Serial/Parallel Port Configuration submenu provides the ability to set the I/O addresses and interrupt levels for the infrared ports of your system.



- To prevent IRQ and address conflicts, avoid changing the default settings. If you must change the settings, you can call 1-800-8Fujitsu for technical assistance.
- All I/O addresses in Table 5 are in hexadecimal.



I/O addresses, DMA channels, and Interrupt levels can be entered in various ways, including via the BIOS setup utility, the control software for the I/O device, or the hardware. If any two ports or devices have the same I/O address assigned your system will not function normally. Please keep a record of original settings before making any changes in the event that a restoration is required. See your hardware and software documentation as well as the setup utility to determine settings, limitations, etc.

PhoenixBIOS Setup Utility		
Advanced		
IrDA Port Configurations		Item Specific Help
Serial Port:	[Enabled]	[Disabled]
Base I/O Address/IRQ	[3F8/IRQ 4]	The port is disabled.
Infrared Port:	[Enabled]	[Enabled]
Mode:	[FIR]	The port is enabled with user configuration.
Base I/O Address/IRQ:	[2E8/IRQ 3]	
DMA Channel:	[DMA 3]	
Parallel Port:	[Enabled]	[Auto]
Mode:	[Bi-directional]	Plug & Play OS
Base I/O Address:	[378]	configure the port.
Interrupt:	[IRQ 7]	

F1 Help	↑↓ Select Item	-/Space Change Values	F9 Setup Defaults
ESC Exit	↔ Select Menu	Enter Select ► Sub-Menu	F10 Save and Exit

Figure 5. Serial/Parallel Port Configuration Submenu

Table 5: Fields, Options and Defaults for Serial/Parallel Port Configurations Submenu of Advanced Menu

Menu Field	Options	Default	Description
Serial Port:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled ▪ Auto 	[Enabled]	Configures the serial port using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Base I/O Address/IRQ:	<ul style="list-style-type: none"> ▪ 3F8/IRQ 4 ▪ 2F8/IRQ 3 ▪ 3E8/IRQ 4 ▪ 2E8/IRQ 3 	[3F8/IRQ 4]	Allows user to set the serial port base I/O address and interrupt when serial port is Enabled.
Infrared Port:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled ▪ Auto 	[Enabled]	Configures the infrared port using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Mode:	<ul style="list-style-type: none"> ▪ IrDA ▪ FIR 	[FIR]	When the infrared port is enabled this option is available allowing the user to set the mode for the infrared port. Standard IrDA (IrDA 1.0) transmits data at up to 115.2 Kbps; FIR (IrDA 1.1) transmits at up to 4Mbps.
Base I/O Address/IRQ:	<ul style="list-style-type: none"> ▪ 3F8/IRQ 4 ▪ 2F8/IRQ 3 ▪ 3E8/IRQ 4 ▪ 2E8/IRQ 3 	[2E8/IRQ 3]	Allows user to set the infrared port I/O address and interrupt when the infrared port is Enabled.
DMA Channel:	<ul style="list-style-type: none"> ▪ DMA 1 ▪ DMA 3 	[DMA 3]	Allows user to set the direct memory access channel when FIR is Enabled.
Parallel Port:	<ul style="list-style-type: none"> ▪ Disabled ▪ Enabled ▪ Auto 	[Enabled]	Configures the parallel port using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Mode:	<ul style="list-style-type: none"> ▪ Output Only ▪ Bi-directional ▪ ECP 	[Bi-directional]	When the parallel port is enabled this option is available allowing the user to set the mode for the parallel port. Bi-directional allows two-way transfer of information between your notebook and a parallel device. Output Only (Half Duplex) allows information to be transferred in only one direction, from your notebook to the printer or similar device. ECP Mode allows communication with the ECP class of parallel I/O devices.
Base I/O Address:	<ul style="list-style-type: none"> ▪ 378 ▪ 278 ▪ 3BC 	[378]	Allows user to set the parallel port base I/O address when the parallel port is Enabled.
Interrupt:	<ul style="list-style-type: none"> ▪ IRQ 5 ▪ IRQ 7 	[IRQ 7]	Allows user to set the parallel port interrupt when the parallel port is Enabled.

Keyboard/Mouse Features Submenu of the Advanced Menu

The Keyboard/Mouse Features submenu is for setting the parameters of NumLock.

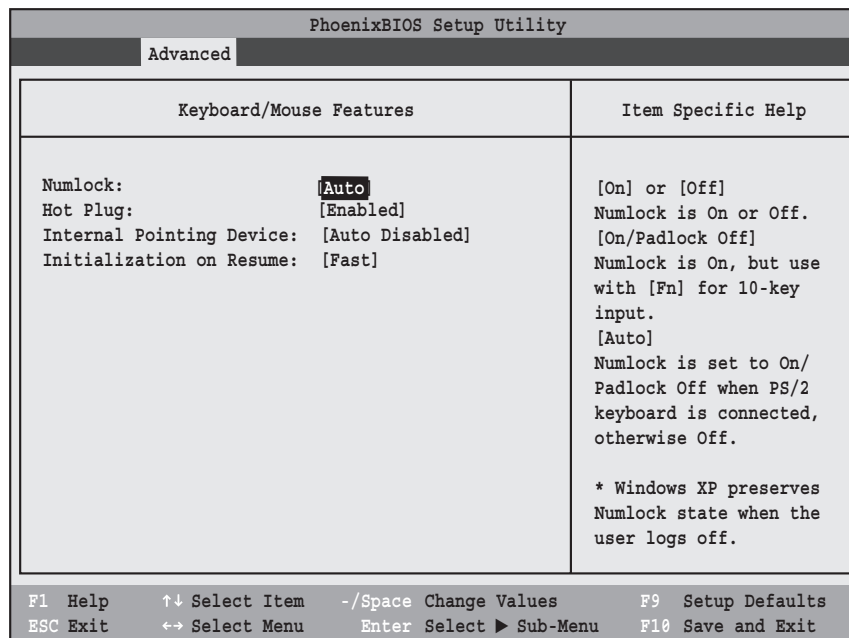


Figure 6. Keyboard/Mouse Features Submenu

Table 6: Fields, Options and Defaults for the Keyboard/Mouse Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Numlock:	<ul style="list-style-type: none"> • Auto • On • Off • On/Padlock Off 	[Off]	Sets the NumLock function state when the computer completes booting. When [On] or [Off], Numlock is on or off. When [On/Padlock Off] is pressed, Numlock is on, but [Fn] key must be pressed used for 10-key input. When [Auto] is selected, Numlock is set to On/Padlock Off when a PS/2 keyboard is connected, otherwise it is off. Windows preserves Numlock state when the user logs off.
Hot Plug:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables the hot-pluggability of the external device.
Internal Pointing Device:	<ul style="list-style-type: none"> • Auto Disabled • Manual Setting • Always Enabled • Always Disabled 	[Auto Disabled]	When [Auto Disabled] is selected, the internal pointing device is disabled when an external PS/2 device is connected. When [Manual Setting] is selected, the internal pointing device can be enabled or disabled with a hot key. When [Always Enabled] is selected, the internal device is always enabled; when [Always Disabled] is selected, the device is always disabled.
Initialization On Resume:	<ul style="list-style-type: none"> • Fast • Normal 	[Fast]	When [Fast] is selected, the initialization of external PS/2 devices is optimized to speed up upon resume. (If PS/2 devices do not function after resume, select [Normal]). When [Normal] is selected, PS/2 device initialization is not optimized.

Video Features Submenu of the Advanced Menu

The Video Features Submenu is for setting the display parameters.

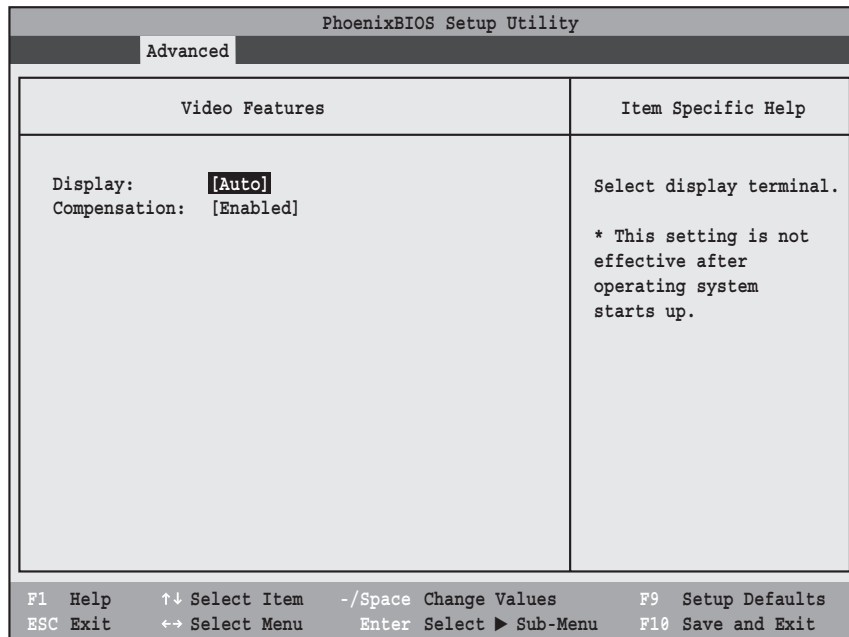


Figure 7. Video Features Submenu

Table 7: Fields, Options and Defaults for the Video Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Display:	<ul style="list-style-type: none"> • Internal Flat Panel • External (Analog) • External (Digital) • Auto 	[Auto]	Selects where the video signal will be routed. Note that once the system boots up, the settings for the Windows video driver take precedence over this setting.
Compensation:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables display compensation. Display compensation is used to match the native resolution of the display with the input. For example, if you are using an application whose resolution causes it to appear smaller than the screen, enabling Compensation will expand the image to fill the screen.

Internal Device Configurations Submenu of the Advanced Menu

The Internal Device Configuration submenu allows the user to configure other internal devices.

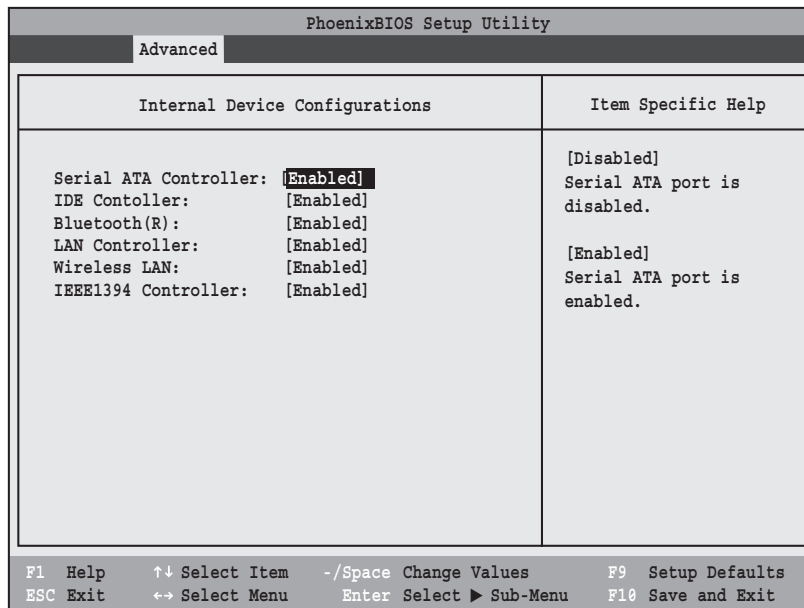


Figure 8. Internal Device Configuration Submenu

Table 8: Fields, Options and Defaults for the Internal Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Serial ATA Controller:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables serial ATA devices.
IDE Controller:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Allows you to enable and/or disable any or all IDE devices.
Bluetooth(R):	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables the optional Bluetooth device.
LAN Controller:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables the LAN controller.
Wireless LAN:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables the optional wireless LAN device.
IEEE1394 Controller:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	Enables or disables the IEEE 1394 device.

CPU Features Submenu of the Advanced Menu

The CPU Features Submenu allows the user to enable or disable the AMD Virtualization(TM) feature.

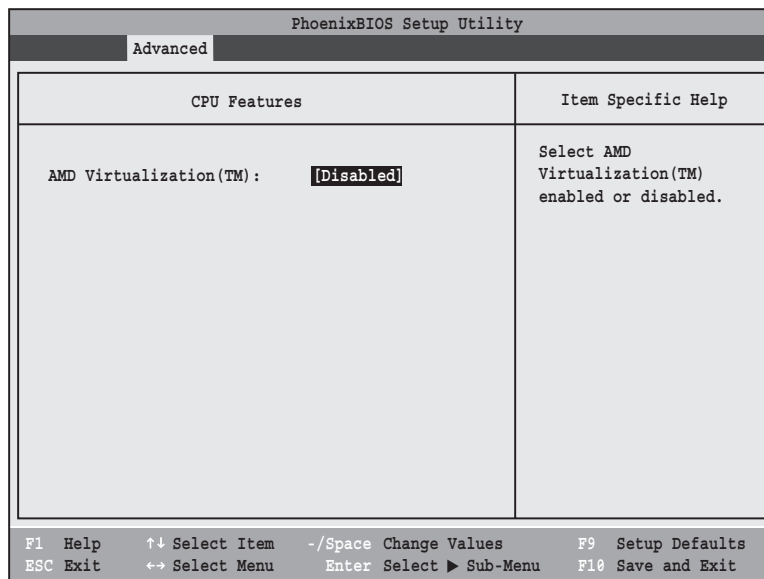


Figure 9. CPU Features Submenu

Table 9: Fields, Options and Defaults for the CPU Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
AMD Virtualization(TM)	<ul style="list-style-type: none"> • Enabled • Disabled 	[Disabled]	Enables or disables the AMD Virtualization(TM) feature.

USB Features Submenu of the Advanced Menu

The USB Features Submenu configures the USB features for your system.

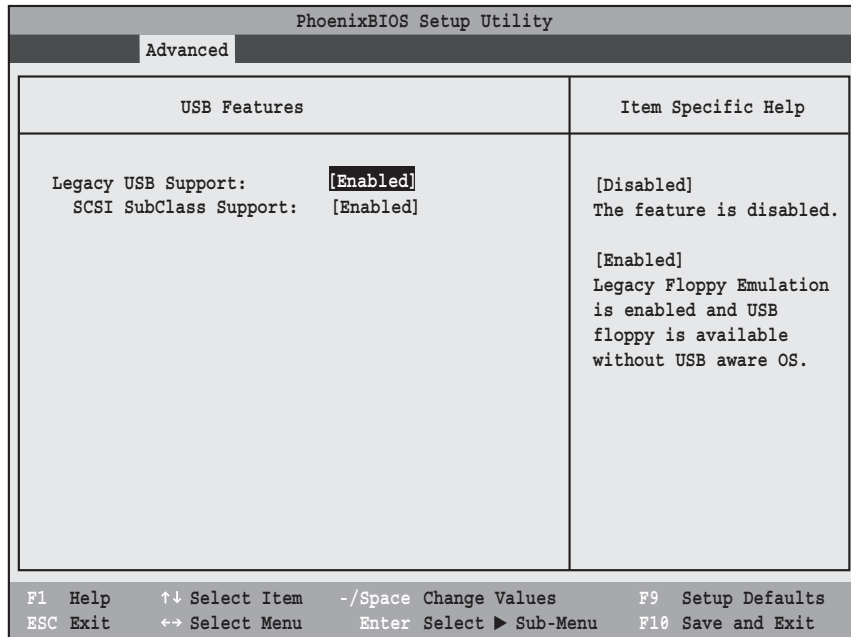


Figure 10. USB Features Submenu

Table 10: Fields, Options and Defaults for the USB Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Legacy USB Support:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	When Disabled is selected, legacy USB emulation is disabled. When Enabled is selected, legacy USB emulation is enabled and USB devices are available without USB-aware OS.
SCSI SubClass Support:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	When Enabled is selected, USB devices that belong to the SCSI subclass in the mass storage class (e.g., USB Memory Key) are enabled.

Miscellaneous Configurations Submenu of the Advanced Menu

The Miscellaneous Configurations Submenu configures miscellaneous features for your system.

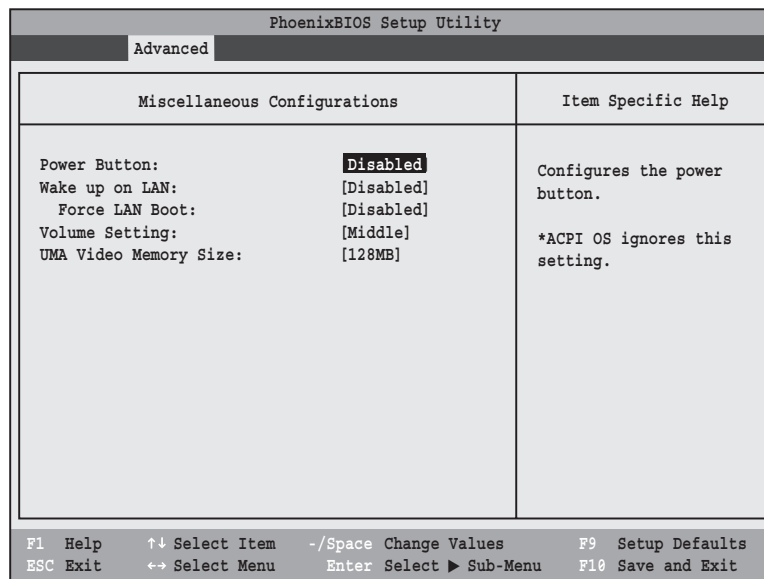


Figure 11. Miscellaneous Configurations Submenu

Table 11: Fields, Options and Defaults for the Miscellaneous Configurations Submenu

Menu Field	Options	Default	Description
Power Button:	<ul style="list-style-type: none"> Disabled Power Off 	[Disabled]	When Disabled is selected, the power button does not respond to a press. When Power Off is selected, the button turns the power off.
Wake up on LAN:	<ul style="list-style-type: none"> Disabled Enabled 	[Disabled]	When Enabled is selected, system will wake up when internal LAN device receives a Magic Packet while the system is powered off.
Force LAN Boot:	<ul style="list-style-type: none"> Disabled Enabled 	[Disabled]	This feature is active only when "Wake up on LAN" is enabled. When enabled, in the event of a system wake-up on LAN, the system will try to first boot from the LAN before attempting to boot from any other device, regardless of the BIOS boot priority settings or disabling of the Preboot Execution Environment.
Volume Setting:	<ul style="list-style-type: none"> Off Minimum Middle Maximum 	[Middle]	Selects the initial volume setting for the system.
UMA Video Memory Size:	<ul style="list-style-type: none"> 32MB 64MB 128MB 224MB 	[128MB]	Allows you to select the maximum shared video memory size. Video memory is dynamically allocated as needed for running applications by Dynamic Video Memory Technology (DVMT).

Event Logging Submenu of the Advanced Menu

The Event Logging Submenu configures event logging features for DMI events.

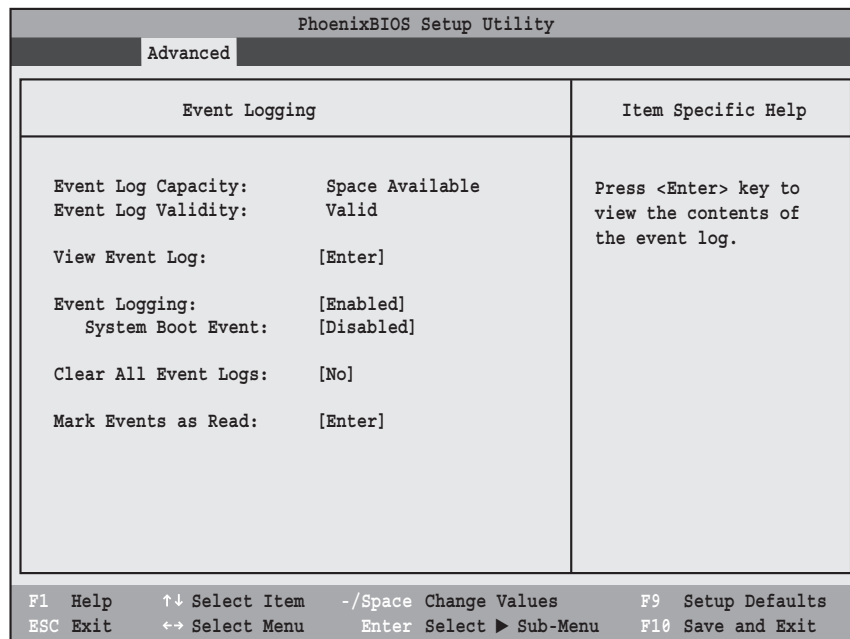


Figure 12. Event Logging Submenu

Table 12: Fields, Options and Defaults for the Event Logging Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Event Log Capacity:		Space Available	Display only.
Event Log Validity:		Valid	Display only.
View Event Log:	• Enter	[Enter]	Allows you to view content of event log.
Event Logging:	• Disabled • Enabled	[Enabled]	Turns event logging on and off for all DMI events.
System Boot Event:	• Disabled • Enabled	[Disabled]	Turns event logging on and off for DMI system boot events.
Clear All Event Logs:	• No • Yes	[No]	When set to [Yes] all event logs will be cleared at next boot.
Mark Events as Read:	• Enter	[Enter]	Allows you to make all events currently in the event log as read.

SECURITY MENU – SETTING THE SECURITY FEATURES

The Security menu allows you to set up the data security features of your notebook to fit your operating needs and to view the current data security configuration. Follow the instructions for Navigating Through the Setup Utility to make any changes. (See *Navigating through the Setup Utility* on page 2 for more information)



Entering a password incorrectly three times in a row will cause the keyboard and mouse to be locked out and the warning [System Disabled] to be displayed. If this happens, restart the computer by turning off and on the power with the power switch and use the correct password on reboot. **Note:** Unless you have previously enabled the power switch in the BIOS, it will not be possible to turn off the unit with the switch. This is applicable for non-ACPI OS's.



- If you set a password, write it down and keep it in a safe place. If you forget the password you will have to contact your support representative to regain access to your secured functions and data.
- If you make an error when re-entering the password a [Warning] will be displayed on the screen. To try again press the [Enter] key and then retype the password. Press the [Esc] key to abort the password setting process.
- If the Password on Boot is Disabled you will not have to type your password upon resuming the system from the Suspend or Save-to-Disk modes.

The following tables show the names of the menu fields for the Security menu and its submenus, the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use. The default condition is no passwords required and no write protection.

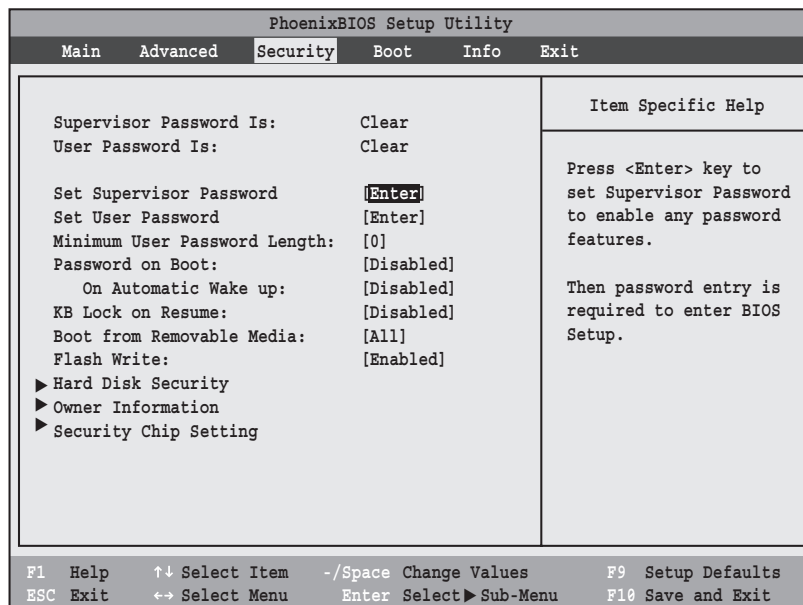


Figure 13. Security Menu

Table 13: Fields, Options and Defaults for the Security Menu

Menu Field	Options	Default	Description
Supervisor Password is:	—	Clear	A display-only field. Set is displayed when the system Supervisor Password is set and Clear when it is not.
User Password is:	—	Clear	A display-only field. Set is displayed when the general User Password is set, and Clear when it is not.
Set Supervisor Password	[Enter]	[Enter]	Sets, changes or cancels Supervisor Password. The Supervisor Password may be up to eight characters long and include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a Supervisor Password is set it must be used to access the BIOS setup utility.
Set User Password	[Enter]	[Enter]	This field can only be accessed if the Supervisor Password is set. Sets, changes or cancels the User Password. The User Password may be up to eight characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a User Password is set it must be used to access the BIOS setup utility.
Minimum User Password Length:	[0]	[0]	Sets the minimum length for User Password.
Password on Boot:	<ul style="list-style-type: none"> • Disabled • First Boot • Every Boot 	[Disabled]	When Enabled, a password (User or Supervisor) is required after Power On Self Test (POST) before the operating system will be read from a disk. When set to Disabled no password is required. If no Supervisor Password is set this feature is not available and no password is required.
On Automatic Wake up:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Disabled]	This field is active only when Password On Boot is set to First Boot or Every Boot. When disabled, password entry is not required on automatic wake up on LAN or Real Time Clock. When enabled, the password is still required on automatic wake up.
KB Lock on Resume:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Disabled]	When [Enabled], this feature locks out PS/2 keyboard and mouse inputs upon resume until a password is entered. (This feature only works when any password is entered before OS boot. When [Disabled], this feature is disabled.
Boot from Removable Media:	<ul style="list-style-type: none"> • All • Supervisor only 	[All]	Selecting Supervisor Only allows supervisor access only.
Flash Write:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	When set to disabled, the BIOS Flash Memory will be write-protected.
Hard Disk Security	—	—	Submenu that allows you to configure hard disk security features.
Owner Information	—	—	Submenu that allows you to set Owner information.
Security Chip Setting	—	—	Submenu that allows you to configure the security chip.

Hard Disk Security Submenu of the Security Menu

The Hard Disk Security Submenu is for configuring hard disk security features.

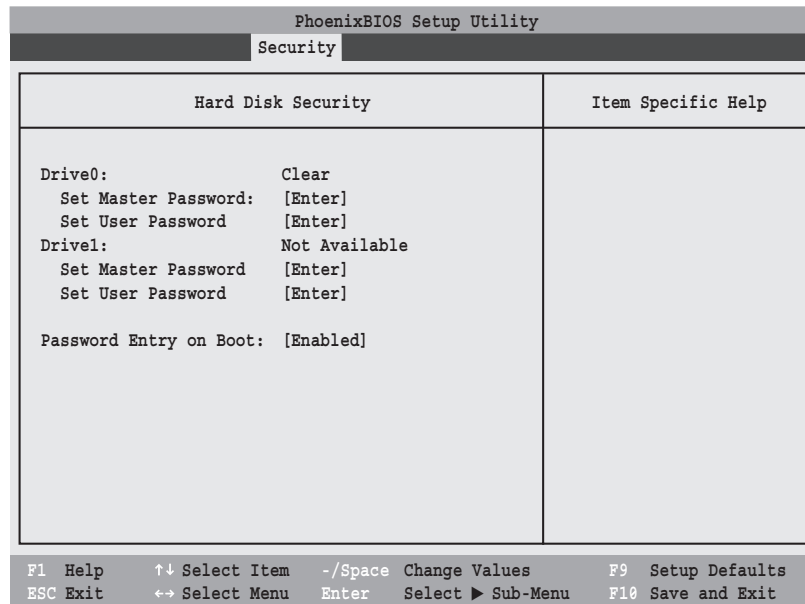


Figure 14. Hard Disk Security Submenu

Table 14: Fields, Options and Defaults for the Hard Disk Security Submenu of the Security Menu

Menu Field	Options	Default	Description
Note that when a Master Password is set for a hard disk drive, the hard disk drive will only function in a system that has the same hard disk drive password. If the drive is put into another system with no password or with a different password, the hard disk drive will not work. Note, however, that the data on the drive is not encrypted.			
Drive0	Clear	-----	Display only. Either Clear or Set, depending upon whether a Master Password is entered for Drive0 in the following field.
Set Master Password	-----	Enter	Allows you to enter a master password when a supervisor password has been set.
Set User Password	-----	Enter	Allows you to enter a user password when a supervisor password has been set.
Drive1:	---	---	A display-only field. Not Available is displayed.
Set Master Password	---	Enter	
Set User Password	---	Enter	
Password Entry on Boot:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Enabled]	When disabled, it is not necessary to enter the password before booting. The hard disk is still password-protected without entering password.

Owner Information Submenu of the Security Menu

The Owner Information Submenu is for setting owner information. Note that Owner Information cannot be set without having entered a supervisor's password.

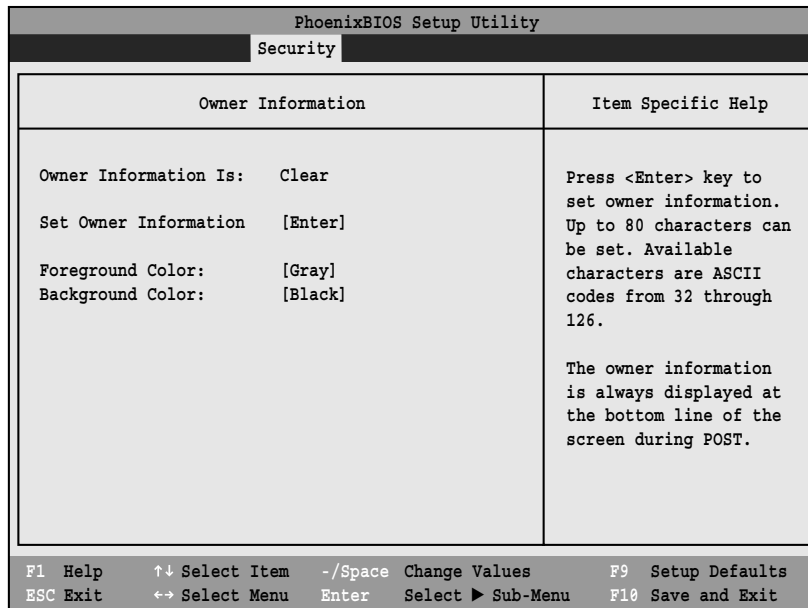


Figure 15. Owner Information Submenu

Table 15: Fields, Options and Defaults for the Owner Information Submenu of the Security Menu

Menu Field	Options	Default	Description
Owner Information Is:	—	Clear	Display only.
Set Owner Information:	—	[Enter]	Field to write owner information (e.g., your name).
Foreground Color:	<ul style="list-style-type: none"> <li style="width: 25%;">• Black <li style="width: 25%;">• Red <li style="width: 25%;">• Gray <li style="width: 25%;">• Light Red <li style="width: 25%;">• Blue <li style="width: 25%;">• Magenta <li style="width: 25%;">• Light Blue <li style="width: 25%;">• Light Magenta <li style="width: 25%;">• Green <li style="width: 25%;">• Brown <li style="width: 25%;">• Light Green <li style="width: 25%;">• Yellow <li style="width: 25%;">• Cyan <li style="width: 25%;">• White <li style="width: 25%;">• Light Cyan <li style="width: 25%;">• Bright White 	[Gray]	Set foreground color.
Background Color:	<ul style="list-style-type: none"> <li style="width: 25%;">• Black <li style="width: 25%;">• Red <li style="width: 25%;">• Gray <li style="width: 25%;">• Light Red <li style="width: 25%;">• Blue <li style="width: 25%;">• Magenta <li style="width: 25%;">• Light Blue <li style="width: 25%;">• Light Magenta <li style="width: 25%;">• Green <li style="width: 25%;">• Brown <li style="width: 25%;">• Light Green <li style="width: 25%;">• Yellow <li style="width: 25%;">• Cyan <li style="width: 25%;">• White <li style="width: 25%;">• Light Cyan <li style="width: 25%;">• Bright White 	[Black]	Sets background color.

Security Chip Setting Submenu of the Security Menu

The Security Chip Setting Submenu is for enabling or disabling the embedded security chip.

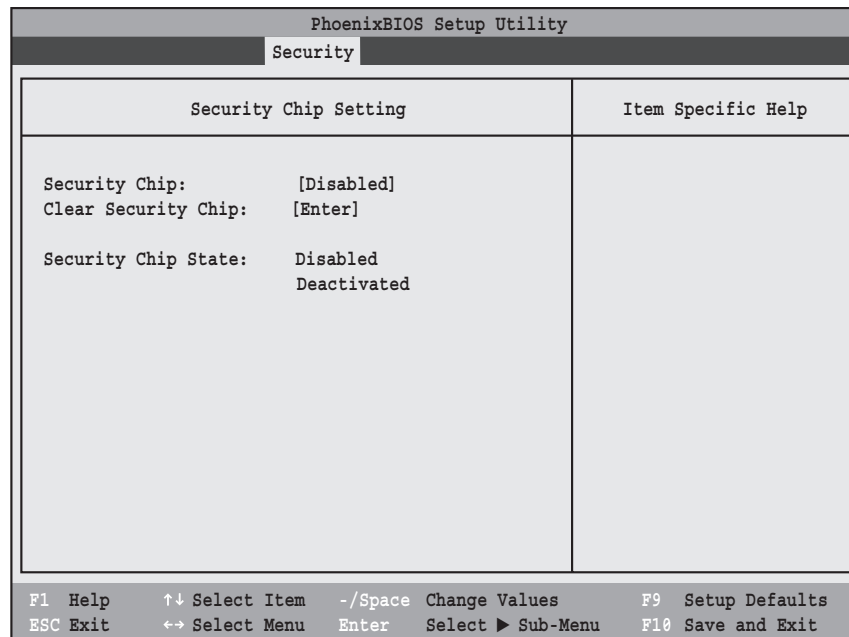


Figure 16. Security Chip Setting Submenu

Table 16: Fields, Options and Defaults for the Security Chip Setting Submenu of the Security Menu

Menu Field	Options	Default	Description
Security Chip:	<ul style="list-style-type: none"> • Disabled • Enabled 	[Disabled]	Allows you to enable or disable the security chip. Note that this is only active if a Supervisor Password has been entered. A reboot is required after exit to configure the Security Chip correctly. Clear Security Chip option becomes selectable after reboot.
Clear Security Chip	—	[Enter]	This field is not selectable until after the security chip is enabled and the system is rebooted.
Security Chip State:	—	—	Display only, to indicate the state of the chip if it has been enabled, disabled, activated or deactivated.

Exiting from the Security Menu

When you have finished setting the parameters on the Security Menu, you can either exit from setup utility or move to another menu. If you wish to exit from setup utility, press the [Esc] key to go to the Exit Menu. If you wish to move to another menu, use the cursor keys.

BOOT MENU – SELECTING THE OPERATING SYSTEM SOURCE

The Boot Menu is used to select the order in which the BIOS searches sources for the operating system. Follow the instructions for Navigating Through the Setup Utility to make any changes. (See *Navigating through the Setup Utility on page 2 for more information*)

The following tables show the names of the menu fields for the Boot menu and its submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

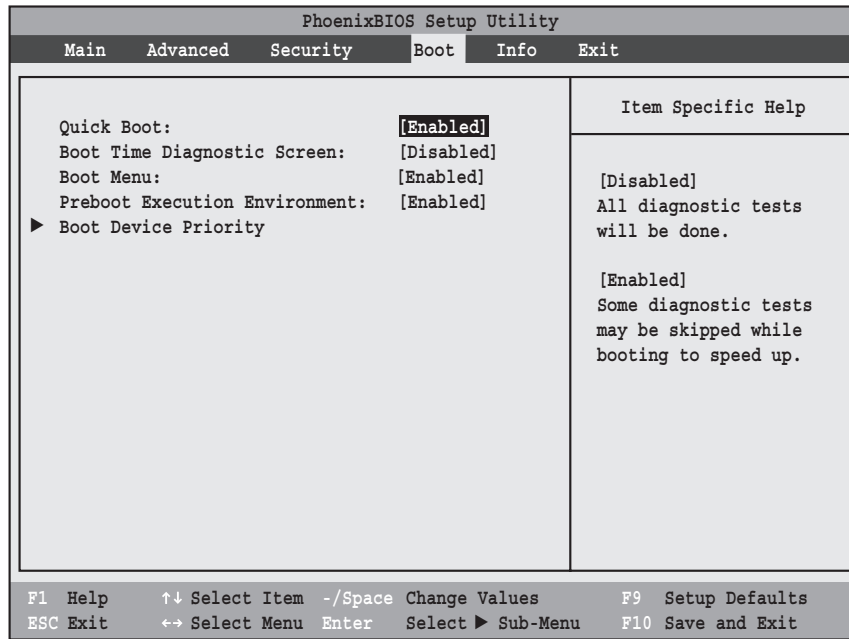


Figure 17. Boot Menu

Table 17: Fields, Options and Defaults for the Boot Menu

Menu Field	Options	Default	Description
Quick Boot:	<ul style="list-style-type: none"> Disabled Enabled 	[Enabled]	Turns on and off booting with a truncated set of Power On Self Tests. (Fewer tests mean faster booting.)
Boot Time Diagnostic Screen:	<ul style="list-style-type: none"> Disabled Enabled 	[Disabled]	Turns on and off display of test results instead of Fujitsu logo screen during Power On Self Test.
Boot Menu:	<ul style="list-style-type: none"> Disabled Enabled 	[Enabled]	When disabled, the [F12] key cannot be used to invoke the Boot menu. When enabled, click the [F12] button to display the Boot menu while booting up.
Preboot Execution Environment:	<ul style="list-style-type: none"> Disabled Enabled 	[Enabled]	Turns on and off boot from network server options.
Boot Device Priority:	Selects Boot Device Priority submenu	—	This menu allows setting up the source for the operating system. See “Boot Device Priority Submenu” in the following section. Pressing the [F12] key will also let you choose the boot device.

Boot Device Priority Submenu of the Boot Menu

The Boot Device Priority submenu is for setting the order of checking of sources for the operating system.



- Be aware of the operating environment when booting from a CD or you may overwrite files by mistake.
- A bootable CD-ROM has either a floppy disk or a hard drive format. When a bootable CD-ROM is used, drive allocations change automatically without changing the BIOS setup. If floppy disk format is used, the CD-ROM becomes Drive A. The CD-ROM will only take drive C: (hard drive format) if the internal hard drive is not present or is disabled. A bootable CD-ROM cannot use a C: designation if a formatted internal hard drive is present since the C: designator is always reserved for the internal hard drive. The boot sequence ignores new drive designations, but your application software will use the new designations.
- In order for a portable USB memory device (e.g., JumpDrive or memory stick) to be recognized in the Boot Device Priority list, it must have been installed before booting the system.
- Note that some older portable USB memory devices may not be recognized as bootable devices.
- The Boot Menu can also be invoked outside of the Setup Utility using the TrustedCore menu or the [F12] key. (See *Using the TrustedCore Menu on page 2 for more information*)

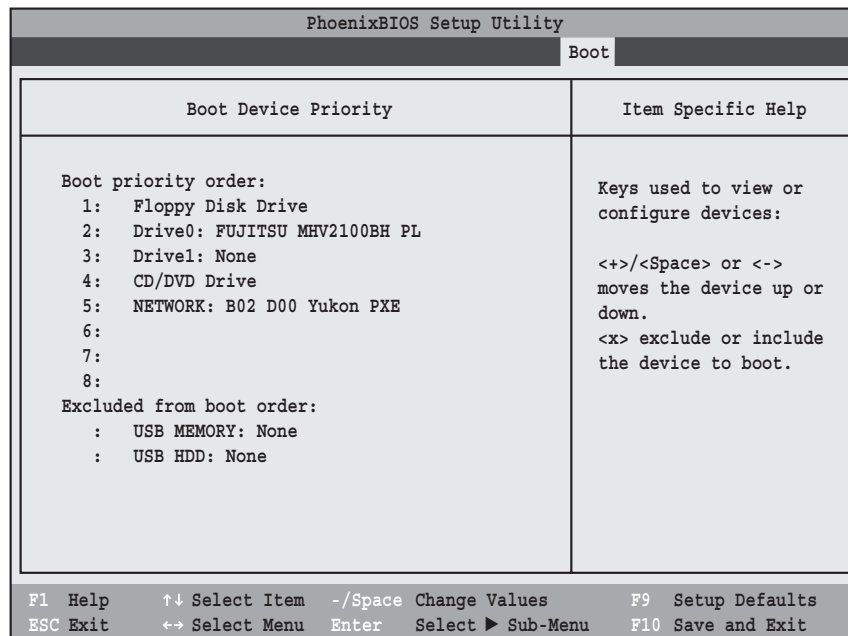


Figure 18. Boot Device Priority Submenu

Table 18: Fields, Options and Defaults for the Boot Device Priority Submenu of the Boot Menu

Menu Field	Description
Boot priority order: 1: Floppy Disk Drive 2: Drive0: 3: Drive1: 4: CD/DVD Drive 5: NETWORK: 6: 7: 8: Excluded from boot order: : USB MEMORY: : USB HDD:	The boot selections determine the order in which the BIOS searches for the operating system during a startup sequence. To change the order, highlight one source by using the [up] or [down] cursor keys and then press the [+] or [-] key to change the order number. Tapping [x] removes from the list a device that is not installed. Tapping [x] on an item in the Excluded list adds the device to the Boot priority list. Be sure to save your changed order when you exit the BIOS setup utility. NOTE: Be aware that if you use the CD-ROM drive as the first boot device, certain files may be overwritten, depending upon your operating environment.

Exiting from Boot Menu

When you have finished setting the boot parameters with the Boot menu, you can either exit from the setup utility or move to another menu. If you wish to exit from the setup utility press the [Esc] key to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

INFO MENU – DISPLAYS BASIC SYSTEM INFORMATION

The Info menu is a display only screens that provides the configuration information for your notebook.

The following table shows the names of the menu fields for the Info menu and the information displayed in

those fields. These fields are for information purposes only, and are not editable.



The information, including CPU type and speed, and total memory, displayed on this screen varies according to the unit you purchased.

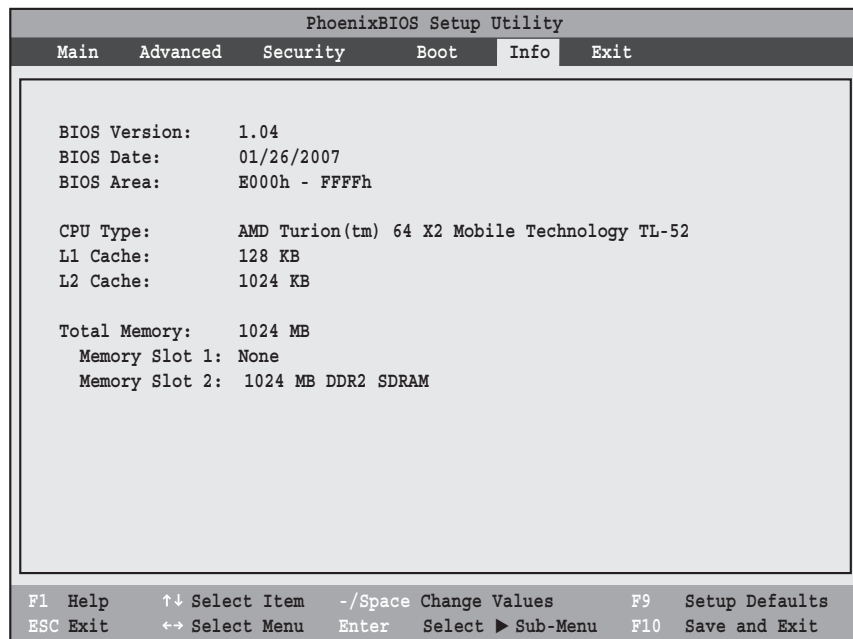


Figure 19. Info Menu

Table 19: Fields, Options and Defaults for the Info Menu

Note that the parameters listed in the following table may be different, depending upon your system configuration.

Menu Field	Default	Menu Field	Default
BIOS Version:	X.XX	L2 Cache:	1024 KB
BIOS Date:	XX/XX/XXXX	Total Memory:	1024 MB
BIOS Area:	E000h – FFFFh	Memory Slot 1:	None
CPU Type:	AMD Turion(tm) 64 X2 Mobile Technology TL-52	Memory Slot 2:	1024 MB DDR2 SDRAM
L1 Cache:	128 KB		

EXIT MENU – LEAVING THE SETUP UTILITY

The Exit Menu is used to leave the setup utility. Follow the instructions for Navigating Through the Setup Utility to make any changes. (See *Navigating through the Setup Utility on page 2 for more information*). The following table shows the names of the menu fields for the Exit menu, the default settings and a description of the field's function and any special information needed to help understand the field's use.

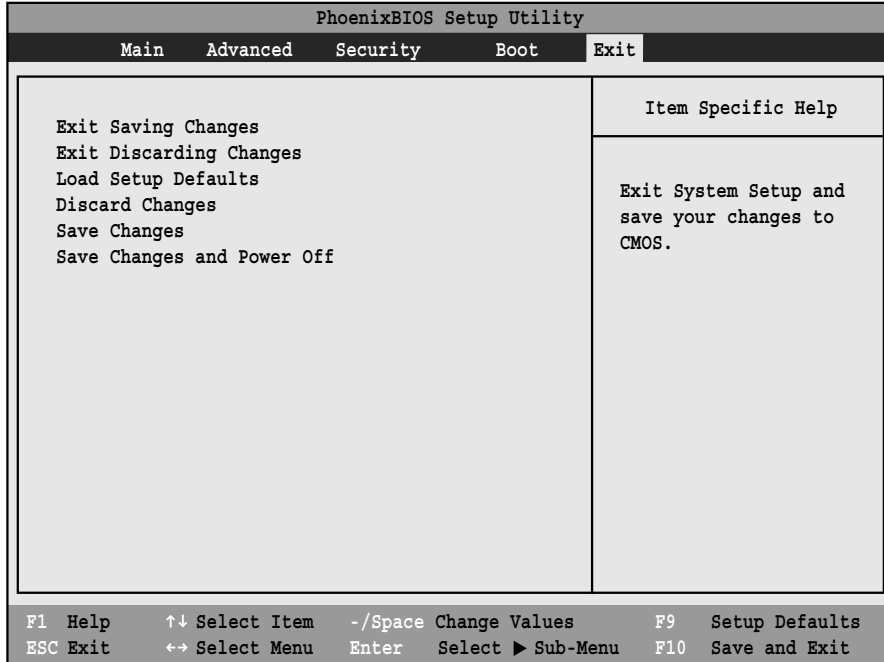


Figure 20. Exit Menu

Table 20: Fields, Options and Defaults for the Exit Menu

Menu Field	Description
Exit Saving Changes	Exit Saving Changes and Exit will store all the entries on every menu of the setup utility to the BIOS memory and then exit the setup utility. A confirmation message <code>Save Configuration changes and exit now? [Yes] [No]</code> will be displayed.
Exit Discarding Changes	Selecting Exit Discarding Changes and Exit will exit the setup utility without writing to the BIOS memory. When the BIOS recognizes this selection it will load the operating system and begin operation.
Load Setup Defaults	Selecting Load Setup Defaults will load the factory preset default values for all menu fields, then display the message <code>Load default configuration now? [Yes] [No]</code> . When confirmed the setup utility will return to the Exit Menu. To return to another menu follow the directions in the Navigating Through the Setup Utility Section.

Table 20: Fields, Options and Defaults for the Exit Menu

Menu Field	Description
Discard Changes	Selecting Discard Changes will load the previous values in BIOS memory for all menu fields. The message <code>Load previous configuration now? [Yes] [No]</code> will be displayed. When confirmed the utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility Section.
Save Changes	Selecting Save Changes causes the new settings in all menus to be written to the BIOS memory. The message <code>Save configuration changes now? [Yes] [No]</code> will be displayed. When confirmed, the setup utility will return to the Exit menu. To go to another menu, follow the directions in the Navigating Through the Setup Utility section.
Save Changes and Power Off	Selecting Save Changes and Power Off will cause the new settings in all menus to be written to the BIOS memory, then power the system off. The message <code>Save configuration changes now and power off? [Yes] [No]</code> will be displayed. When confirmed, the setup utility shut down the system.